

**REMARKS-General**

1. The amended independent claims 1 and 37 incorporate all structural limitations of the original claims 1 and 37 and includes further limitations previously brought forth in the disclosure. No new matter has been included. All claims 1-63 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

**Response to Rejection of Claims 1-63 under 35USC103**

2. The Examiner rejected claims 1-63 over Takashi (Japan Publication No. 2000-357296) in view of Obradovich (US 6,525,768) and Breed et al (US 6,720,920). Pursuant to 35 U.S.C. 103:

“(a) A patent may not be obtained thought the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

3. In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

4. In other words, the differences between the subject matter sought to be patent **as a whole** of the instant invention and Takashi which is qualified as prior art of the instant invention under 35USC102 are obvious in view of Obradovich and Breed at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

5. The applicant respectfully submits that in order to determine whether the differences between the subject matters sought to be patent as a whole of the instant invention and the primary prior art, Takashi, are obvious in view of the supplemental cited arts, Obradovich and Breed et al, we have to identify all the differences between the claims of the instant inventions and Takashi. The applicant respectfully identifies the differences between the claims of the instant invention and Takashi as follows:

(a) The overall system communication configurations of the two systems are obviously different. The instant invention uses a **unified wireless internet** communication system to realize both transmission and receiving of the position data between the individual users. Whereas, Takashi patent uses **two different** communication systems for the data exchange between the individual users. A wireless telephone system is used for data transmission; and a satellite communication system is used for data broadcasting, which ascertains that all the individual users will receive one another's position data.

(b) The difference of the overall system communication configurations is also presented as that the instant invention is a **distributed, decentralized** communication networking system, whereas, Takashi patent must use a **centralized** wireless telephone station and a **centralized** satellite communication broadcasting station.

(c) The system of Takashi patent is a system only for vehicle position tracking, while the instant invention is a **versatile position tracking system for multiple applications**, such as personnel/soldier tracking, fixed wing UAVs, helicopters, robots, cars and other unmanned ground vehicles, as shown in the following figures from an AGNC document for a **US Army** project. The system of the instant invention has been used and demonstrated for many years in US Army contract, W15QKN-04-C-1003, "Reusable GPS/IMU/EO/RF/Laser Realtime Componentized Testbed for Future Combat System", November 2003.

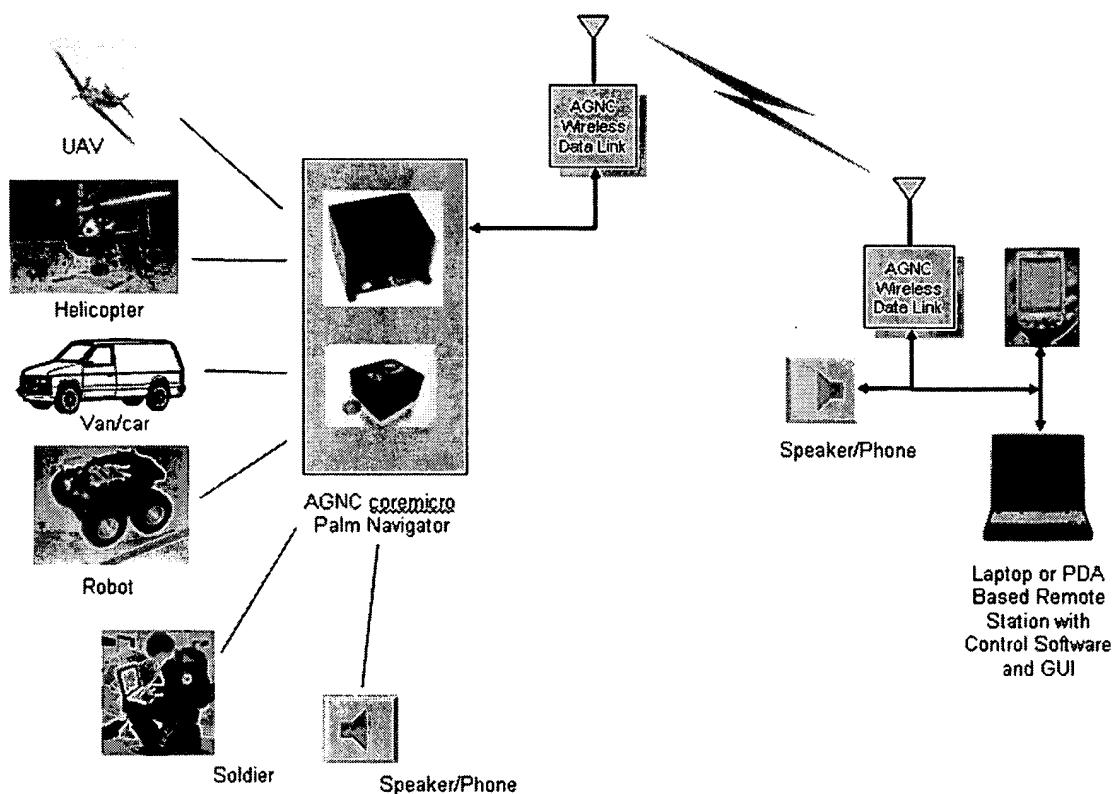


Figure A

The above Figure A is from Figure 1 The coremicro Palm Navigator Demonstration System with AGNC RF Data Link, of Software Product Specification of the US Army contract "Wireless Wide Area Networked Precision Geolocation for Combat Decision Aids System", Contract No.: W15QKN-05-C-1189, November 2004, and Contract No.: W15QKN-06-C-0085, January 2006 .

(d) As for the navigator unit, the system of Takashi patent is a system that can only be connected to a vehicle system, while the instant invention system has a very flexible interface configuration designed for a suite of different unit implementations and different applications, as shown in the following figure.

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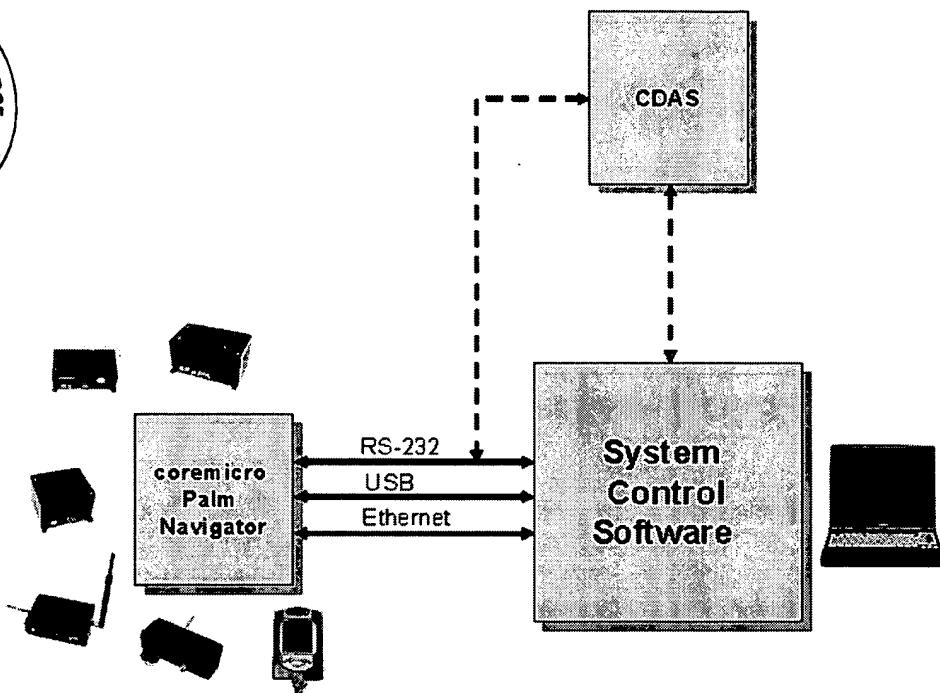


Figure B

The above Figure B is from Figure 1 Application of the System Control Software from Software Product Specification of the US Army contract "Multi-agent Information Fusion and Decision Aid for Future Combat System", Contract No.: W15QKN-04-C-1129, February 2005.

6. In view of Obradovich patent, the objectives of the Obradovich patent and the instant invention are different. The instant invention is for a method and system for **multi-tracking**, while the Obradovich patent is for a data provision and display system.
7. The **system architectures** of the two systems are different. Comparison can be seen in Fig. 1 of the instant invention and Fig. 4 of the Obradovich patent. See Figure A for a practical application of the instant invention.
8. The instant invention has camera and speaker/phone devices connected to the system processor, but the Obradovich patent does not have the mentioned devices connected to the system processor directly. The system of the instant invention has been used and demonstrated in the project for many years.

9. The Obradovich patent **only** uses GPS as positioning device, thus it can not provide position information when the unit is indoor or in an environment where GPS signals are blocked or jammed. Whereas, **the instant invention uses both GPS and IMU and other external devices as positioning sensors**. Thus the system of the instant invention will provide self-contained navigation functionality even when the GPS signals are blocked or jammed, it still provides interruption-free position information for the users.

10. The **system implementation method and algorithms** are totally different. The comparison of the two respective algorithms can be seen in Figs. 5 to 12 of the instant invention and in Figs. 5A to 5E of the Obradovich patent respectively.

11. The instant invention system unit can track both the position of itself and the position of other multiple peer units and display them on the map with other GIS information. Whereas, the Obradovich patent system only provides position display of the unit itself on the requested map from the data provider.

12. Breed, on the other hand, merely teaches a system for communicating between vehicles without any mention of how to provide multi-target tracking and to directly exchange data between individual by the wireless Internet.

13. According to the instant invention, the portable multi-tracking method and system provides **interruption-free navigation** when GPS is not available. The instant invention is responsible for the development of interruption-free navigation and tracking method and system with high accuracy, where GPS signals are not consistently available. The interruption-free method and system can receive but not rely on GPS signals. Without GPS signals, the system provides a highly accurate positioning and attitude solution. The system of the instant invention is highly useful in areas where GPS signals are not available, such as under high jamming environments. In addition, the user's position information can be exchanged with other users through the wireless communication device, and the location and surrounding information can be displayed on the display device by accessing a map database with the position information. Therefore, it will leverage the portable multi-tracking method and system to provide position, navigation information and communications for homeland defense such as US ARMY and US Maine. In fact, US ARMY and US Maine are now using "Coremicro Palm Navigator"

containing the "portable multi-tracking method and system" technology of the instant invention.

14. Accordingly, the applicant believes that neither Takashi, Obradovich nor Breed et al, separately or in combination, suggest or make any mention whatsoever of the difference subject features mentioned above as claimed in the claims 1 to 63 of the instant invention.

### **Commercial Success**

15. Attached hereto is a Rule 132 Declaration by the inventor or assignee, Ching-Fang LIN, of the present application.

16. Ching-Fang LIN currently makes and sells "Coremicro Palm Navigator" embodying the subject matter of the '859 application's claims 1-63. This Coremicro Palm Navigator containing the "portable multi-tracking method and system" technology is contracted and delivered to US ARMY and US Maine. The Awards from US ARMY and US Maine are shown as follows: **(Attachment 1a)** US ARMY ARDEC Contract No. W15QKN-04-C-112; **(Attachment 1b)** Contract No. W15QKN-04-C-1129; Statement of Work; **(Attachment 2a)** US ARMY ARDEC Contract No. W15QKN-04-C-1003; **(Attachment 2b)** The Final Software Users Manual Cover Page; **(Attachment 3a)** US ARMY ARDEC Contract No. W15QKN-06-C-0085; **(Attachment 3b)** Software Design Description Cover Page; **(Attachment 3c)** Software Product Specification Cover Page; **(Attachment 4a)** US Marine Corp. Contract No. M67854-00-C-0023; and **(Attachment 4b)** US Maine Corp. Contract No. M67854-00-C-0023.

17. More than eighteen units of Coremicro Palm Navigator are already delivered to US ARMY and US Maine. Accordingly, the portable multi-tracking method and system of the instant invention is mainly used for National Guard, such as US ARMY and US Maine. In other words, the instant invention is not used as a domestic appliance.

18. The applicant believes that, an important reason for the commercial success of the Coremicro Palm Navigator is its superior safety characteristics, which has been expressed in claims 1-63 of the '859 application. According to the applicant's knowledge no other commercially available Coremicro Palm Navigator has achieved such standout characteristics as mentioned above.

19. The Rule 132 Declaration sets forth in detail evidence of the commercial success, which is a portable multi-tracking method and system, embodying claims 1-63 made and sold by applicant and his entity, American GNC corporation, a licensee of the present application. Based on this evidence, it both rebuts the *prima facie* of obviousness and establishes an important secondary factor of non-obviousness, namely commercial success.

20. The instant invention as claimed in the claims 1 to 63 contains structural features different to each of the cited arts. The instant invention is already successfully marketed in the United States. The volume of sale substantially proves that National Guard (US ARMY and US Maine) satisfy with the structural features of the instant invention. Regardless of the structural features different from the cited arts is distinctive or obvious, if the instant invention fails to obtain a patent with claims for limited protection, everybody in this industry (including the applicants of the cited arts) can simply copy the structural features of the instant invention without the need of investing any research and development cost but to compete with the applicant in lower product cost in the applicant's market. It is not only an unfair competition but also violates the spirit of encouraging invention and technology development of the patent law. Accordingly, a secondary factor of commercial success for non-obviousness is established and the Examiner is requested to reconsider and withdraw the obviousness rejection made against claims 1-63.

#### **The Cited but Non-Applied References**

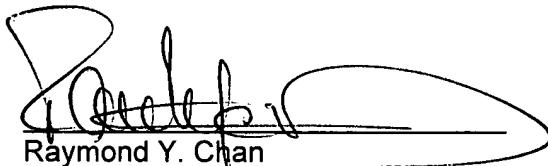
21. The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

22. Attached hereto are a Rule 132 Declaration by the inventor and the attachments of the supporting documents.

23. In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection are requested. Allowance of claims 1-63 at an early date is solicited.

24. Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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#### CERTIFICATE OF MAILING

I hereby certify that this corresponding is being deposited with the United States Postal Service by First Class Mail, with sufficient postage, in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on the date below.

Date: April 20, 2006



Signature: Raymond Y. Chan  
Person Signing: Raymond Y. Chan